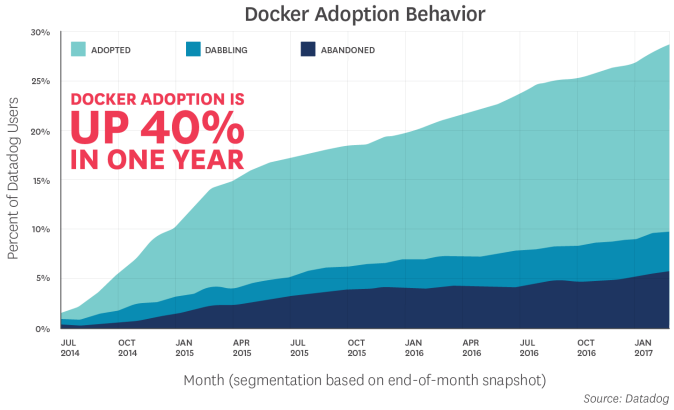
CONTAINER UPTAKE IN THE TECH. INDUSTRY

It's easy, but sadly naive to assume the technology industry will embrace innovation due to its very nature. The reality is more complex and parameters for success encompass strength of a community, availability of professional support, staff hire/retention, and cross platform portability - for whatever we are defining as a platform. This paper looks to examine container technology uptake across the industry as a whole.

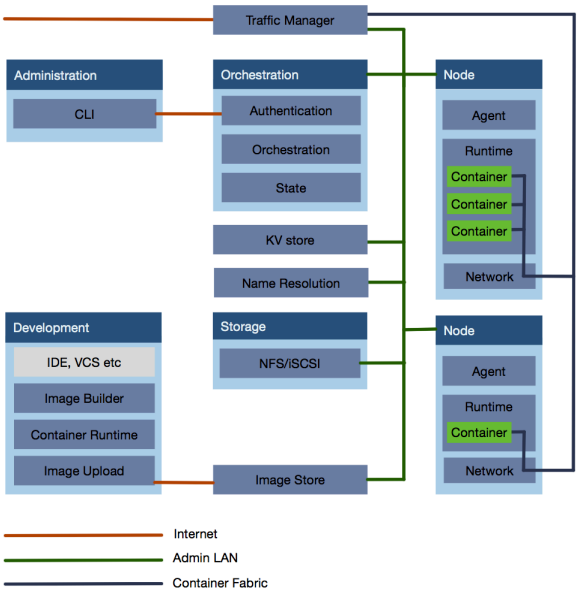
HYPERSCALE BUSINESS LOVES CONTAINERS, and while buzzwords and hyperbole are generally distasteful - the truth is that many of today's huge companies could simply not exist without containers. Google **run 'everything' in containers** and have done so for at least ten years. Similar results can be seen at Facebook (**"Tupperware"**), LinkedIn (**"Rain"**) and Twitter (run **40% containers**). Obviously these companies are able to apply huge quantities of engineering resource towards their container infrastructure, so it's relevant to ask what the situation is for 'the rest of us'.

THE ENTERPRISE IS STARTING TO ADOPT CONTAINERS. Leaning heavily on **DataDog's excellent paper on container adoption** we can see that container adoption has calmed from it's initial explosive growth and has settled at a fairly consistent **40% year on year**.



To put this in context, the peak **Internet adoption rate** was about 15%, the **Smartphone adoption rate** was about 20%, **SaaS** is 33% and **Cloud computing itself** is 19%.

BUT COMPLEXITY IS NOT HELPING. This diagram shows the major components required for a traditional container infrastructure - including the need for SDN, and no fewer than six dependent applications before you add a single node. Current "single click" installations hide this complexity behind a deployment script - but a need to maintain or customise the environment will quickly expose the underlying architecture.



Research from **Network Computing**, **Convox, TechTarget,** and **Outlier** all cite complexity as the main barrier to adoption of containers. And as companies get smaller, so this barrier becomes more significant.

20FT LIVES FOR SIMPLICITY. A single application on the head node, and a single application on each child. 20ft orchestrates compute, network, storage, image caching, and traffic management with no involvement from either users or administrators. It *adds* filesystem snapshots, serverless ssh/sftp and 'garbage collection' of orphaned containers - facilities which proved to be necessities once the platform was used in earnest. It's a hard road, being simple.

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